BC ONLINE SEXUAL HEALTH SERVICES

Toward a diverse set of tools in the online partner notification toolkit

Intention to use specific online resources among sexually transmitted infection clinic clients

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Summary

We surveyed sexually transmitted infection clinic clients regarding their intention to use different tools for partner notification (PN). Most participants preferred notifying their partners themselves with intention varying by tool and participant characteristics. A range of options are needed to support diverse PN preferences and to complement provider-delivered PN.

Introduction

Partner notification (PN) is a core public health activity to control sexually transmitted infections (STI) through case-finding, preventing re-infection, and interrupting ongoing transmission.(1) Rising STI detection rates in Canada and elsewhere strain public health capacity for timely and comprehensive PN. As such, measures which strengthen the implementation and effectiveness of PN are needed in order to contribute to greater control of STI.(1) Given that many clients prefer to notify partners themselves, one focus for improving PN has been to develop online tools to facilitate clients' notification of partners including anonymous e-mail or texting services or online educational resources.(2) The potential benefit of online PN tools is in the notification of partners who would not otherwise be notified (3, 4), including for STI that warrant partner treatment but are not typically reported to public health.

The impact of these tools is challenging to evaluate due to difficulty in determining partner outcomes, with evaluation of the e-mail-based "Suggest-a-test" program the first to fully demonstrate receipt of notification by and subsequent treatment of partners.(5) These tools may also have potential for population harm if preferential use by clients leads to missed opportunities for HIV and STI testing by eliminating the opportunity to connect with skilled providers who are considered more effective in achieving these PN outcomes.(6)

A nuanced understanding of the role of online PN tools is emerging with recognition that specific tools are used by subsets of clients diagnosed with STI and in specific scenarios (e.g., with casual partners).(2, 3, 5, 7) We do not yet have a good understanding of the preferences of STI clients for particular online PN tools, nor what mix of tools are needed to meet the needs of different STI client groups. Our objective for this exploratory study was to describe the characteristics of STI clinic clients that intend to use different proposed PN tools if diagnosed with an STI.

Methods

We conducted an anonymous waiting room survey of a convenience sample of clients during 2014-15 in Vancouver, British Columbia at an STI clinic serving approximately 10,000 clients per year (survey details published elsewhere).(8) For this study, in addition to standard socio-demographic questions, we asked participants to consider the scenario of being diagnosed with an STI and likelihood of using (i.e., intention) five online PN tools: i) send text message from a website; ii) send email from a website; iii) use sample letter/email for PN; iv) read tips for PN, v) watch video about PN (all 5-point Likert scales, collapsed into very likely/likely versus other for analysis). Intention to send a text message and intention to send an email were correlated (Pearson's r=0.75, 95% CI 0.73, 0.78) and conceptually related and were therefore combined as a single outcome in analysis. Likewise, intention to read tips and intention to watch videos were combined (Pearson's r=0.70, 95% CI 0.67, 0.73). We also asked about likelihood of telling the clinic nurse about all partners in the past year, and

preferred PN strategy (self, nurse, or mixed) in order to describe the relationship between intention to use online PN tools and involvement of providers in PN. For variables potentially related to intention to use online PN tools, we used logistic regression to estimate odds ratios (OR) and 95% confidence intervals (CI; CI excluding 1 indicating statistical significance). All analyses were completed in R version 3.1. Ethics approval was obtained from the University of British Columbia research ethics board.

Results

In our sample of 1313 participants, 61.7% identified as male, and 80.9% reported opposite-gender partners only (Table 1). Most (61.0%) reported that all partners in the past year could be contacted and 82.6% reported being likely or very likely to tell a clinic nurse about all of their sex partners in the past year; for notification of partners, most (86.7%) preferred to do it themselves. Overall, 75.9% indicated they intended to use ≥ 1 online PN tool: 26.2% an email/text service, 25.5% a sample letter/e-mail, and 68.9% read tips or watch a video. 10.3% intended to use all three proposed tools, while 4.4% only intended to use the email/text service (but not the other two tools), 0.7% only intended to use the sample letter/e-mail, and 34% only intended to read tips or watch a video.

Table 1: Characteristics of survey participants and intention to use specific online partner notification resources (N=1313)

Characteristic	Total N=1313 n (%[a])
Gender	
Female	490 (38.0)
Male	796 (61.7)
Transgender	4 (0.3)
Sexual orientation[c]	
MSW	612 (48.0)
WSM	421 (32.9)
MSM/T	175 (13.7)
WSW/T	68 (5.3)
Age	
19-29 years	531 (41.7)
30-39 years	442 (34.7)
40+ years	299 (23.5)
Ethnicity[d]	
Aboriginal	49 (3.7)
Asian	215 (16.4)
Arab	8 (0.6)
Black/African	31 (2.4)
Caucasian/White	927 (70.6)
Hispanic	57 (4.3)
South Asian	57 (4.3)
Other	50 (3.8)

Characteristic	Total N=1313 n (%[a])
Communication methods used in general	
Email	974 (74.2)[b]
Internet at home	831 (63.3)[b]
Smartphone with internet access	1038 (79.1)[b]
Text messaging	978 (74.5)[b]
Number of oral, anal or vaginal sex partners (past year)	
0-1	291 (23.1)
2-4	623 (49.4)
5-9	224 (17.8)
10+	123 (9.8)
Partners that could be contacted (past year)	
All	749 (61.0)
Most	226 (18.4)
Some	184 (15.0)
None	68 (5.5)
Comfort with talking to partners about STI (10 point scale: 1 not at all comfortable, 10 very comfortable)	
Average score (range)	6.7 (1, 10)
Low (<5)	420 (32.6)
High (≥5)	867 (67.4)
Likelihood of telling clinic nurse about all sex partners (past year)	
Never	8 (0.6)
Not likely	56 (4.3)
Neutral	163 (12.5)
Likely	361 (27.6)
Very likely	718 (55.0)
Preference for telling partners	
Notify all partners myself	1007 (86.7)
Nurse notifies some	128 (11.0)
Nurse notifies all	26 (2.2)
Preferred method for telling partners if done themselves	
In person	1001 (76.2)
By phone	595 (45.3)
By text message	189 (14.4)
By email	119 (9.1)
Through social media	62 (4.7)
Through dating/hookup site or app	32 (2.4)

Characteristic	Total N=1313 n (%[a])
Intention to use proposed online partner notification resources	
Send text message to a partner from website	
Never/not likely/neutral	1037 (81.3)
Likely/very likely	239 (18.7)
Send an e-mail to a partner from website	
Never/not likely/neutral	988 (78.0)
Likely/very likely	278 (22.0)
Use sample letter/email to notify on own	
Never/not likely/neutral	937 (74.5)
Likely/very likely	320 (25.5)
Read tips about talking to partners	
Never/not likely/neutral	442 (34.5)
Likely/very likely	838 (65.5)
Watch a video about talking to partners	
Never/not likely/neutral	633 (50.2)
Likely/very likely	629 (49.8)

Note. [a] percent of column calculated out of valid responses (missing data not shown); [b] percent of row; [c] Calculated based on responses to questions of own gender and partner gender(s) in past year; MSW=men (inclusive of transmen) who have sex with women; WSM=women (inclusive of transwomen) who have sex with men; MSM/T=men (inclusive of transmen) who have sex with men or trans partners (inclusive of men who have sex with men and women); WSW/T=women (inclusive of transwomen) who have sex with women or trans partners (inclusive of women who have sex with women and men); [d] ethnic categories not mutually exclusive.

Correlates of intention to use these online PN tools varied across subgroups, including by sexual orientation and ability to contact partners (Table 2). We found no differences by age, or by comfort level with talking to partners about having an STI. Participants with 5-9 and > 10 partners in the past year were more likely to use an email/text service, and those with 2-4 and 5-9 partners were more likely to read tips/watch video. Participants unlikely to disclose all sex partners to a clinic nurse were significantly less likely to use a sample letter or email, or read tips or watch a video, although use of an email/text service did not differ based on likelihood of disclosure. Finally, intention differed by notification preferences, with higher likelihood of using an email/text service for participants preferring nurses to notify some or all of their partners, as well as for those who would use means other than direct communication (i.e., in-person, by phone) to notify their partners.

Discussion

Our study suggests that there is no “one size fits all” online PN tool but rather that a range of options are needed to support diverse PN preferences. Most participants preferred to notify partners themselves, which likely explains why the highest intention across all subgroups was to read tips or watch a video about talking to partners. The odds of using these tools were higher in clients with a medium number of partners, who were able to contact all or most of their partners, and who were likely to tell a clinic nurse about all partners in the past year. Hence for clients with relatively few barriers to PN, online educational resources that facilitate direct communication with partners may be sufficient.

About a quarter of participants in our survey indicated they would be likely to use an email/text service; this was higher in participants reporting a higher number of partners, those able to contact some or most of their partners, and preference for clinic nurses to contact all or some partners. These characteristics may reflect individuals who have casual partners and is consistent with prior research of the acceptability of email/text PN tools.(3, 5) Although not significant, intention to use an email/text service did increase with decreasing age, perhaps reflecting preferred routes of communication or greater technology acceptance. Finally, a similar proportion of survey participants indicated they were likely to use a sample letter or email for PN, with the least variability in intention among subgroups of the online PN tools presented.

With respect to the potential for online PN tools to eliminate the opportunity to engage with provider (in this case, nurse) delivered PN, only 2.2% preferred all their partners to be notified by clinic nurses, with 11.0% preferring a mixed model. As the likelihood of using an email/text service was higher in both of these groups, it is possible that such a service may lead to partners previously notified by providers now being notified by clients. However, this potential harm assumes that clients disclose information about all of their partners to providers. In our survey 17.4% of participants were not likely (or neutral/uncertain) to do so, of whom many expressed interest in use of the proposed online PN tools. If shifts away from provider-delivered PN occur with introduction of online PN tools, they may partially be offset by increased notification of partners who would otherwise not be disclosed to a provider. As we did not observe significantly greater intention to use online tools in this potentially important subgroup, it may be that factors unrelated to the client-provider interaction may be influencing disclosure (e.g., anonymous partners, or barriers to communication with both providers and partners). This is an important area for further research.

Conclusion

Our study suggests that a range of online PN tools may complement existing efforts to engage clients diagnosed with an STI in provider-delivered PN. If promoted and widely used, these tools may also be of benefit for prioritizing increasingly scarce public health resources for STI follow-up, by permitting provider-delivered PN to be focused on individuals at greater risk of re-infection or with potentially more serious infections such as HIV or syphilis. Further research in this area would be helpful outside of STI clinic settings, including with clients in primary care practices where the majority of all STI are diagnosed, among populations with higher STI incidence (e.g., youth, gay bisexual and other men who have sex with men), as well as with people who have been diagnosed with STI and have direct – not hypothetical – experiences of PN. It will also be important to continue efforts to assess the impact that online PN tools have on the entire spectrum of partner services, including testing and expedited partner therapy.

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